FOREWORD

This final report on the ECCO Pilot project is submitted in compliance with the contractural agreement entered into between the Corporation of the City of Toronto and Her Majesty the Queen in right of Ontario represented by the Ministry of Energy dated July 6, 1982, and authorized by Motion of Council, 766-7350, on August 12, 1982.

Research and Information Section
Planning and Development Department,
City of Toronto; Stephen G. McLaughlin, Commissioner

SUMMARY - ECCO PILOT PROJECT

Project Area

Riverdale (Map 1) - seventy thousand residents and eighteen thousand house-form residential buildings.

Project Aims

- develop a municipally co-ordinated energy service for homeowners;
- improve the quality of retrofit work;
- establish a data base on energy efficiency of homes, measurement of savings obtained from energy saving actions;
- ensure that those who are willing and able to take energy conserving actions do so effectively;
- reach those who have not so far been motivated to act, especially minority language groups; and
- test various services and approaches to encouraging energy saving actions in the home.

Project Services

Range of services developed to provide a "one-stop-shop" approach were:

- Home energy check-up
- Furnace fuel efficiency test
- ECCOLine
- Housewarming Party
- Energy Renovation Advice
- Courses and workshops
- Hardware Store Demonstrations

Special Events

- Gerrard Square Energy Show
- Technical Professional Seminars

Related Services

- Howland House
- Ecumenical Energy Working Group (EEWG) - Riverdale Project
- Toronto Board of Education - Project ACE (Advocate Conservation Effectively)

Project Results

- A total of 2009 or 11% of Riverdale households were contacted through one of the services.

- Energy Renovation Advice and the Housewarming Party developed into the more successful project services.

- Energy Renovation advice proved very successful in meeting the project aim of improving the quality of retrofit work. The service is being made available City-wide and is being integrated into on-going services of the Buildings and Inspection Department.

- Networking of the project team with existing Community groups and organizations was the approach which best penetrated the community. Flyers and word of mouth recommendations also encouraged participation in project services.

- Contact of ethnic community groups, and use of language newspapers for translated articles worked well with the Chinese community. The Greek community, however, did not respond to this approach.

- A survey of a sample of 567 ECCO participants (28%) - resulted in a 15% response rate. A reduction of 2.5% in heating consumption was recorded for this sample. However this is a biased sample - and not accurate, as most actions were taken after the last heating season.

- EEWG and Howland House proved to be very effective related services to the project - each successful on their own.

- Components of the Pilot are transferable and applicable to other municipalities.

MAJOR FINDINGS

The ECCO Pilot project has some important lessons for other energy advisory projects:

1. Energy advisory projects have two main results for the participating households and for society at large:

   - quantitative benefits, measured as reduced energy consumption, and

   - qualitative benefits, through work being done properly, avoiding problems down the line.

   Neither kind of benefit can be easily measured, especially not immediately after the project has ended.

   Of the two, the quality control benefits are probably more important.

2. Staff for energy advisory services must be qualified and properly trained. This second finding follows from the first -- the importance of quality control. Advisors must be knowledgeable about all current developments in the energy conservation field, which requires special training. This is particularly important in the case of a service. While it is true that some ECCO-type services, such as the housewarming party, can be carried out by people who have been given a modicum of training on specific techniques, this is not desirable; households frequently have detailed technical queries about their homes, and this is a field where a little knowledge can be a dangerous thing.

3. Energy Advisory services are most likely to succeed if initiated and operated within an existing local institutional framework, such as a municipality or a hydro utility. First, this lends credibility to the project and second, it provides the project with continuity and with the necessary administrative and political support. It also allows the service to establish strong ongoing linkages to related existing services of other organizations and other levels of government.

4. Site visits, which allow the advisor to address property-specific concerns, are a key component of an energy advisory service. These are especially effective when combined with ongoing telephone or classroom/demonstration advice.

5. The existing network of community organizations can be an invaluable vehicle for an outreach project. In the same way that emphasis is placed on connecting this project with related organizations/and services, it is important to use the community framework to ease its acceptance and promote its availablity.

6. Projects such as the ECCO Pilot should be seen as transitional. They allow for the training time and organizational adjustments that are prequisites to effective delivery and take-up of services on an ongoing basis. They afford the opportunity to experiment with different services and different promotional techniques, and the time necessary to determine which services should become internalized and which are more appropriately carried out by outside organizations. In the ECCO example, the service of energy renovation advice is developing into an ongoing service of the Buildings and Inspections Department. The project concluded that the housewarming party service would be more appropriately delivered by an outside organization. It is currently being modeled by a public utility, a community group and a private contractor.

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Introduction

This is the final report on the Energy Conservation Community Outreach (ECCO) Pilot project. Its intent is to evaluate the impact of the approaches tested and energy services delivered in the Riverdale community by the ECCO project. The set-up of the project as a pilot allowed for flexibility in both the design and delivery of services throughout the project run.

Jointly funded by the Ontario Ministry of Energy and the City of Toronto, the ECCO project in part was designed to work as a potential model for municipal energy outreach programs. The findings of this report therefore will principally address the ECCO project's implications for other municipalities that may be interested in promoting community energy conservation.

This report has four sections:

1. Project Background - a synopsis of the City's original project proposal.

2. Project Set-up - the organizational design and administration of the project, and the development of project services.

3. Project Delivery - the approaches to field delivery of the project services, and general promotional strategies.

4. Project Results and Conclusions - a qualitative and quantitative review, including tabulated results from a mail-out questionnaire to ECCO project participants, and implications of project findings for other municipalities.

An accompanying document, entitled "ECCO Project Details", contains all background materials, promotional and statistical, which were developed for the project (see Appendix for table of contents). These will be referenced accordingly in this covering report (e.g. Item A - Project Details).

The two most conclusively successful techniques implemented by the pilot were the Housewarming Party and Energy Renovation Advice. Substantive information concerning those will be forthcoming under a new contract with the Ministry of Energy, referred to by the City as the ECCO Transition Project. Under the terms of the new contract, transfer materials will be prepared (including manuals, a course syallabus, and audio/visual presentations on ECCO techniques), for distribution by the Ministry of Energy to municipalities, hydro utilities and other interested organizations, under the umbrella of the Ministry's Community Energy Action Programs.

1. Project Background

In September 1981, following discussions over a number of months, the City of Toronto put forward to the senior governments a proposal for shared funding to undertake a community energy outreach demonstration project. Having approved a set of energy policies in its official plan and having developed an internal energy managment program, the City was ready to advance into a new area - community energy outreach.

An absence of locally implemented models to follow led to the choice of a pilot approach to the project. This type of approach allowed for diversity and experimentation in carrying out the project work. A number of complementary initiatives influenced the project's design. One was the Ministry of Municipal Affairs and Housing's proposal to energy retrofit a typical Toronto house for public demonstration purposes. Officials from the Ministry approached City staff with the idea of operating an outreach program from the house. At the same time, the Ministry of Energy was actively planning its Heatsave Clinic program, which was an attempt to increase the level of energy conserving awareness throughout the City.

Building on these and other initiatives, the City developed a proposal for a pilot project to test the effectiveness of a local government role in assisting senior government in delivering and monitoring energy related programs and activities.

The City's proposal set out a number of objectives, which a community energy outreach program might address (Item A - Project Details, p. 5). These included:

(a) A co-ordinated delivery service of all pertinent programs already offered by other agencies, in addition to acting as a referral service and increasing public awareness of conservation.

(b) Improving the quality of retrofit measures undertaken, both by the homeowner and/or by contractors, by having City Building Inspectors perform a "quality control" function for major improvements.

(c) Establishing a data base on the thermal efficiency of City homes. Information on the current level of awareness of conservation issues, heating fuel types and consumption levels will be necessary for future follow-up evaluations.

(d) Such follow-up evaluations would examine the actual savings achieved in homes implementing the recommended measures. This would help define a more comprehensive set of cost-effective measures specific to the Toronto housing stock, and would be

useful, should specific targets of savings be set, whether within neighbourhoods, sectors or City-wide.

(e) Performing an organizational role for community groups interested in forming more active associations which might pursue such things as active solar, other alternative energy system implementation, co-operative retrofit measures, or community development corporations.

(f) Establishing a feedback mechanism to aid in the evaluation of various City by-laws and regulations as they pertain to the implementation of conservation and renewable energy measures.

(g) Going beyond the physical improvement of structures by influencing consumption patterns through lifestyle, or "housekeeping" changes. Such changes would probably be most effective in terms of payback because they involve little, if any, capital outlay.

These objectives, it was decided, would be best met by a co-ordinated delivery approach, which would need to include the co-operation of federal and provincial ministries and public and private energy utilities. Information on programs of all these agencies would be collected prior to the preparation of a detailed implementation strategy for the project. Components integral to the project's design were to include:

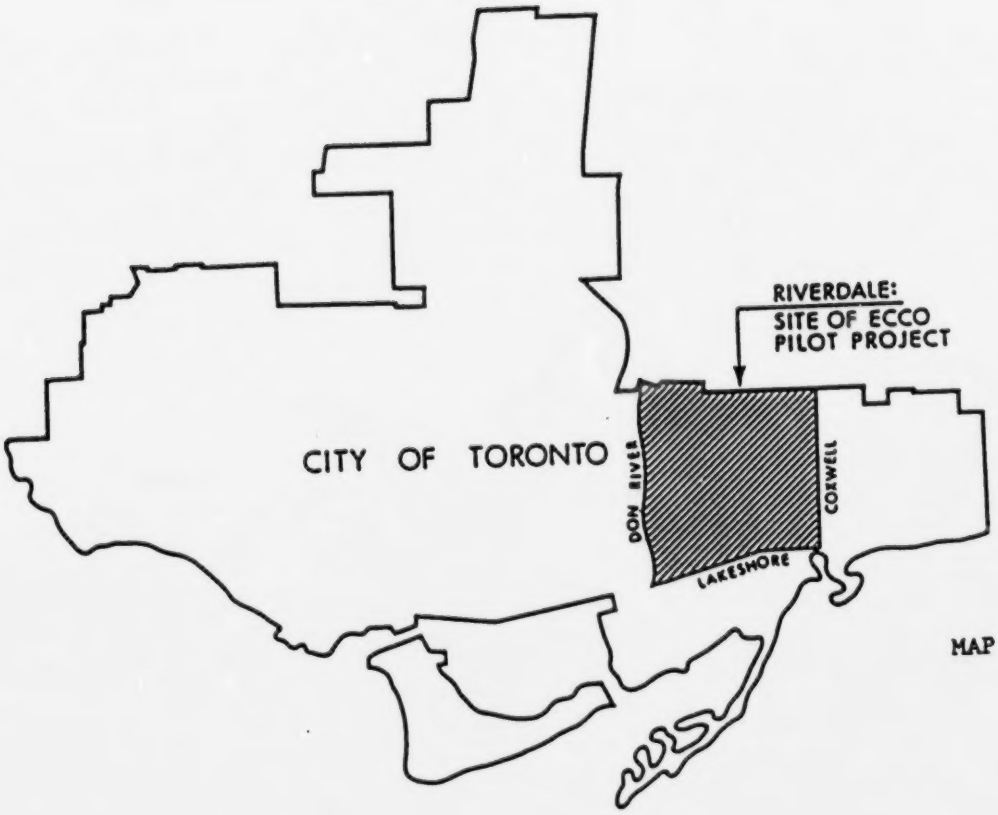
- Information;

- Home Thermal Efficiency Audit;

- Advice on programs and funding assistance. (Including selection of contractor, organizing educational workshops and monitoring work in progress); and

- periodic evaluation."

The pilot area chosen for the project was the Riverdale community (Map 1). This neighbourhood contains seventy thousand residents and eighteen thousand house-form residential buildings. Its mixed ethnic population and its predominantly semi-detached older housing stock made it representative of a typical Toronto neighbourhood. Table 1 summarizes the Riverdale project area's housing and demographic characteristics based on 1981 census statistics. At the time of the drafting of the project proposal, the Riverdale area, sometimes referred to as "Cabbagetown II", was experiencing noticable renovation activity, which reinforced the choice of this community for the pilot project area.



MAP 1

PROJECT AREA

CITY OF TORONTO PLANNING AND DEVELOPMENT DEPARTMENT
STEPHEN G. McLAUGHLIN, COMMISSIONER
RESEARCH AND INFORMATION SECTION OCT., 1983

The location of Howland House (the demonstration house being retrofitted by the Ministry of Municipal Affairs and Housing), also supported the Riverdale choice, as did the schedule for the Heatsave Clinics in the City. The start of the project was planned to coincide with the commencement of the Heatsave Clinic in the east end of the City. It was arranged that the ECCO project staff would be working out of Howland House on its completion.

During the fall of 1981, City Council agreed to fund one third of the project's $229,000 cost. The Ontario Ministry of Energy agreed to fund the balance, while seeking to recover half of this amount from the federal government. A three way contract was drafted, but later abandoned, because of delays in the approval process at the federal level. Instead, a funding agreement between the City and Provice was executed in July 1982. (The federal cabinet approved participation shortly thereafter, but by then it was too late.) Meanwhile, Nancy Singer was hired as the ECCO Co-ordinator early in 1982, and the project got underway.

TABLE 1
SMALL AREA PROFILE FOR: RIVERDALE - ECCO PILOT PROJECT

REFERENCE AREA: CITY OF TORONTO
BOUNDARIES: DON RIVER CITY LIMITS
COXWELL AVENUE LAKESHORE BOULEVARD EAST
CENSUS TRACTS: 18 TO 20 / 26 TO 29 / 69 TO 75 / 82 TO 85

TOPIC	SELECTED AREA			REFERENCE AREA	
	#	%	% REF	#	%
GENERAL INFORMATION					
1981 POPULATION	74,555		12.44	599,217	
1976-81 POPULATION CHANGE	-8,103	-9.80		-34,101	-5.38
LAND AREA (SQ.KM)	9.47		9.76	97.06	
DENSITY (PERSONS/SQ.KM)	7,873			6,174	
AGE GROUPS					
0 - 1	1,905	2.55	14.27	13,350	2.23
2 - 5	3,565	4.78	14.77	24,140	4.03
6 - 9	3,800	5.10	15.93	23,860	3.98
10 - 14	5,265	7.06	15.23	34,575	5.77
15 - 19	6,165	8.27	14.18	43,475	7.26
20 - 24	7,195	9.65	11.81	60,910	10.17
25 - 29	7,525	10.09	11.28	66,735	11.14
30 - 54	24,015	32.21	12.02	199,790	33.36
55 - 59	3,510	4.71	10.96	32,025	5.35
60 - 64	2,990	4.01	11.86	25,220	4.21
65 - 69	2,710	3.63	11.48	23,600	3.94
70 - 74	2,270	3.04	11.48	19,765	3.30
75 AND OLDER	3,645	4.89	11.58	31,485	5.26
MARITAL STATUS INFORMATION					
SINGLE, 15 YRS AND OLDER	20,110	33.46	11.19	179,750	35.74
MARRIED	32,640	54.31	12.43	262,485	52.18
WIDOWED	5,015	8.35	12.89	38,900	7.73
DIVORCED	2,330	3.88	10.65	21,870	4.35
TOTAL, 15 YRS AND OLDER	60,095	100.00	11.95	503,005	100.00
HOUSEHOLD INFORMATION					
PERSONS IN HOUSEHOLDS					
FAMILY PERSONS	55,805	76.59	13.41	416,170	71.42
NON-FAMILY PERSONS	17,060	23.41	10.24	166,540	28.58
PERSONS PER HOUSEHOLD	2.90			2.42	
HOUSEHOLDS BY SIZE					
1 PERSON	6,255	24.93	6.91	90,495	37.51
2 PERSONS	6,765	26.96	10.29	65,760	27.26
3 PERSONS	3,955	15.76	12.87	30,740	12.74
4-5 PERSONS	5,805	23.14	14.13	41,075	17.02
6-9 PERSONS	2,190	8.73	17.39	12,595	5.22
10 OR MORE PERSONS	120	0.48	19.67	610	0.25
TOTAL HOUSEHOLDS	25,090	100.00	10.40	241,275	100.00
FAMILY INFORMATION					
FAMILY PERSONS	55,805		13.41	416,170	
PERSONS PER FAMILY	3.20			3.06	
CHILDREN PER FAMILY	1.38			1.21	
ALL FAMILIES					
HUSBAND - WIFE FAMILIES	14,295	82.11	12.36	115,645	85.06
LONE PARENT FAMILIES	3,115	17.89	15.34	20,310	14.94
TOTAL FAMILIES	17,410	100.00	12.81	135,955	100.00
BY NUMBER OF CHILDREN AT HOME					
0 CHILDREN	5,470	31.45	10.77	50,795	37.33
1 CHILD	4,700	27.02	12.95	36,285	26.67
2 CHILDREN	4,135	23.77	14.20	29,115	21.40
3-4 CHILDREN	2,690	15.46	15.28	17,610	12.94
5 OR MORE CHILDREN	400	2.30	17.74	2,255	1.66
TOTAL FAMILIES	17,395	100.00	12.78	136,060	100.00
CHILDREN AT HOME BY AGE GROUP					
LESS THAN 6 YEARS OLD	5,135	21.35	14.14	36,315	22.07
6 - 14 YEARS OLD	8,790	36.54	15.38	57,170	34.74
15 - 17 YEARS OLD	3,235	13.45	14.57	22,205	13.49
18 - 24 YEARS OLD	4,970	20.66	13.65	36,420	22.13
25 YEARS AND OLDER	1,925	8.00	15.47	12,440	7.56
TOTAL CHILDREN	24,055	100.00	14.62	164,550	99.99

(CONTINUED)

SMALL AREA PROFILE FOR: RIVERDALE - ECCO PILOT PROJECT

REFERENCE AREA: CITY OF TORONTO
BOUNDARIES: DON RIVER CITY LIMITS
COXWELL AVENUE LAKESHORE BOULEVARD EAST
CENSUS TRACTS: 18 TO 20 / 26 TO 29 / 69 TO 75 / 82 TO 85

TOPIC	SELECTED AREA			REFERENCE AREA	
	#	%	% REF	#	%
HOUSING INFORMATION					
HOUSING TENURE					
OWNED UNITS	14,670	58.41	14.83	98,265	40.73
RENTED UNITS	10,445	41.59	7.30	143,010	59.27
TOTAL UNITS	25,115	100.00	10.41	241,275	100.00
HOUSING TYPE					
SINGLE DETACHED	5,385	21.45	10.83	49,745	20.62
HIGH RISE	2,755	10.97	3.50	78,770	32.65
OTHER	16,970	67.58	15.05	112,735	46.73
TOTAL UNITS	25,110	100.00	10.41	241,250	100.00
MOTHER TONGUE INFORMATION					
ENGLISH	47,585	63.83	12.79	372,175	62.11
CHINESE	8,665	11.62	31.42	27,575	4.60
GREEK	5,635	7.56	39.57	14,240	2.38
ITALIAN	3,265	4.38	8.90	36,695	6.12
FRENCH	1,485	1.99	14.31	10,375	1.73
PORTUGUESE	1,190	1.60	2.41	49,380	8.24
GERMAN	925	1.24	9.16	10,100	1.69
OTHER	5,800	7.78	7.37	78,660	13.13
TOTAL	74,550	100.00	12.44	599,200	100.00

2. PROJECT SET UP

The first task of the project co-ordinator was to prepare a detailed work plan (Item C - Project Details). The objectives of the project proposal were translated into deliverable components which, taken together, would form a personalized municipally-coordinated home energy service. The project components, as initially defined by the work plan, were:

- Class A audit (to be referred to as "home energy check-ups"). (Conducted by Toronto Hydro. The audit may be augmented, on request, by furnace efficiency tests conducted by oil companies and Consumers' Gas.)
- Financial and technial advice on recommended measures.
- Co-ordination, direct delivery of information on available funding programs.
- Follow-up inspection of completed work, on request.
- Practical demonstration - "how to" courses.
- List of certified contractors - work specialties.
- Recommended products list (as approved by CMHC and other government agencies).
- Demonstration energy retrofit house (when completed will be ECCO project base).

The first step was to understand the target audience, that is, to obtain a detailed picture of the ethnic make-up of the Riverdale community, the average age range of the population, and general income and education levels. In addition, data were gathered on the housing stock, including the ratio of owner/tenant occupied dwelling units, the age of the dwellings, the predominant types of housing, and levels of building permit activity.

For purposes of project service delivery, the project area was sub-divided along Gerrard Street into North and South Riverdale, and then into ten smaller parcels in each sub-section. The background statistics for the project were prepared by map area (Item D - Project Details).

Simultaneous with drafting the work plan, a project Advisory Committee was established to review and approve the plan, and to provide input throughout the life of the pilot project. Potential members were identified, representing a cross-section of relevant organizations and government agencies. Public and private sector interests were represented in the membership of the committee (Item E - Project Details). At the first ECCO Advisory Committee

meeting in February 1982, there were extensive comments on the draft work plan, which had been distributed to all invited members prior to the meeting. A final work plan was drawn up following this meeting, and submitted to the City Services Committee for information on March 2, 1982.

Coincidental with the development of the work plan and establishment of the Advisory Committee was the restructuring and hiring of the ECCO project team (see diagram). The restructuring was a direct result of the preparation of the work plan, which indicated that the proposed services would be more appropriately and efficiently delivered by a specially trained professional project team. The earlier model depended on the availability of different building staff and part-time student workers, which would have proved inefficient in delivery of services.

PROJECT STAFF RESTRUCTURING

As Proposed	As Implemented
1 Co-ordinator	1 Co-ordinator
Several Student Community Workers	1 Technical Assistant
Buildings and Inspections staff	1 Clerical/Administrative Assistant*
Support as needed	1 Building Inspector (full time secondment)

* There were two student assistants during the project's initial four month phase, from April-July 1982.

The permanent core team therefore consisted of four staff. Support staff to deliver some of the project services in the ethnic languages were hired as needed on an hourly basis. Specialists were hired on the same basis to instruct certain courses. Administrative assistance, including secretarial support, was provided by members of City staff. Overall project management and supervision was under the direction of the Program Manager of the Research and Information Section in the Planning and Development Department. Research and computer programming assistance also was provided by this Section. The organizational chart in the work plan illustrates the reporting structure of the project (Item C, p. 11 - Project Details). Staff meetings of the core team with the Project Manager were held on a regular basis, approximately every three weeks, with prepared agendas and meeting minutes, throughout the pilot run.

Additional staff support external to the City resulted from the close association of the ECCO pilot project with two other organizational efforts in community energy outreach. The first was the Toronto Board of Education's Advocate Conservation Effectively (ACE) program, which was run in 12 elementary level Riverdale schools to co-operate with, and tap into, ECCO pilot project activity in Riverdale. This was a loose association, as the programs were distinct. The ACE program, however, benefitted the ECCO pilot by distributing ECCO literature through the participant schools for children to bring home to their parents.

A stronger relationship existed between the ECCO pilot and the Ecumenical Energy Working Group (EEWG). Interested in initiating their own pilot energy outreach project for religious buildings, the national body of EEWG approached the City when it learned of the ECCO project in Riverdale, and a working association developed whereby EEWG launched their project in Riverdale because of the ECCO project. It was arranged that the project facilitor hired to initiate and administer the program share office space with the ECCO project team at Howland House. There was close collaboration with the ECCO project team in the delivery of EEWG services. More details on this association will be discussed in the evaluation of the project results. A close working association with other energy groups, such as Ecology House staff, also assisted the ECCO project team in the delivery of services.

Essential outside staff support in other service delivery was provided by Toronto Hydro's Energy Conservation Section, staff of which provided a Class A audit, referred to as a "home energy check-up", in Riverdale. ECCO was also able to offer fuel oil check-ups, which were provided by an ESSO service contractor, through Imperial Oil. These services are further defined in the next section, which discusses their development, promotion and delivery.

3. PROJECT DELIVERY

With the work plan accepted, staff hired, and data collection underway, the ECCO team turned its attention to further developing and field testing its proposed project services. Based on the "one-stop-shop" approach to home energy conservation in Riverdale, residents were to be encouraged to take advantage of existing services where possible, with the project providing additional services where appropriate. Using this approach, the ECCO project team was able to provide an extensive range of services (Table 2 - ECCO Pilot Project Services):

Ecco Services

- the home energy check-up, a class A audit offered by Toronto Hydro, was promoted by ECCO and booked through ECCO; a tear-off appointment card formed part of the ECCO brochure;

- the furnace fuel efficiency check-up was provided free of charge by Imperial Oil to any Riverdale residents with oil heating systems; this service could only be booked through ECCO, by filling out ECCO fuel check-up appointment cards;

- the ECCOLine provided telephone information on ECCO services and technical advice on conservation techniques;

- the housewarming party gave residents, their friends and neighbours first-hand experience in carrying out a variety of simple, effective energy saving measures, including caulking, weatherstripping and building pop-in shutters;

- courses and workshops on energy saving techniques were offered to homeowners, contractors, and hardware merchants;

- advice on financial assistance, including OHRP and RRAP as well as CHIP, COSP and other applicable programs, was available from ECCO staff;

- a renovation advice service explaining how to save energy when renovating, including a visit to the site, was offered to all those who applied for residential building permits, or any Riverdale resident who requested the service prior to renovating;

- hardware store demonstrations, designed to encourage proper use of appropriate materials, were offered on Saturday mornings in more than half of all Riverdale area hardware stores;

- the Gerrard Square Energy Show, a week long series of exhibits, demonstrations and dramatic presentations, was organized as part of the ECCO Pilot project in November 1982;

In addition to delivery of ECCO services, the project became directly associated with the following related services:

- Howland House, the Ontario Ministry of Municipal Affairs and Housing's demonstration project in Riverdale, is a showcase of energy conservation ideas; it served as headquarters for, and was partially staffed by, ECCO staff;

- the Ecumenical Energy Working Group, a federally funded project worked in conjunction with ECCO, offered church audits (through Toronto Hydro) and promoted the full range of ECCO services to congregation members; and

- the Toronto School Board's "Project ACE" (Advocate Conservation Effectively) also worked co-operatively with ECCO, scheduling mini-lessons in Riverdale elementary schools and arranging for distribution of ECCO literature; ECCO staff briefed the teaching staff of all 12 participating schools on energy conservation techniques and on ECCO services.

During this pre-delivery test phase, the services of energy renovation advice and the housewarming party were developed by the project team. The housewarming party was conceived to provide a service complementary to the Class A audit. It was aimed towards achieving practical application of recommended measures such as those given in an audit. Aimed at larger groups of homeowners and offering evening and weekend appointments, the housewarming party concept seemed complementary and not contradictory to the audit service.

Energy renovation advice was developed to deliver site specific technical advice to renovators, homeowners or contractors from a qualified building inspector. It was appropriately decided to promote the availability of this service to building permit applicants. The objective behind this service was to increase potential energy actions when renovating and to ensure use of proper techniques and materials. For the City, this was an experimental role for building inspection staff.

Field delivery of ECCO project services can be divided into three distinct phases: spring 1982; fall 1982; and winter/spring 1983. The specific and general services delivered in each of these phases are listed in Table 3. The summer months, July and August 1982, were used to design and prepare for the fall and winter programs, so they were not part of any delivery phase.

Spring 1982

The first delivery phase - spring of 1982 - was planned to coincide with the heatsave clinics, which were being held in the Riverdale area at the time. To build upon any energy conservation interest generated in the community by this program, the ECCO

project team organized its first large scale weatherization seminar, which was advertised through the clinics. It was held on March 30, 1982 in a local high school auditorium. More than 35 people attended this session.

The team then designed its Spring Tune-up Series, which consisted of three separate workshops on sealing, insulating and improving heating system efficiencies. Promotional flyers were distributed to approximately 1,450 Riverdale households on a door-to-door drop-off, concentrating on Map area 5 in North Riverdale. However, attendance at the workshops was minimal, which prompted a major re-evaluation of how best to approach the community. A workshop directed primarily to contractors was also held during this phase. Organized in conjunction with the Ministry of Municipal Affairs and Housing, contractors and other interested professionals were invited to attend a Saturday workshop about the retrofitting of Howland House. A tour of the house - still in the retrofit stage - was included. Background materials on some of these ECCO-organized events can be found in Item F - Project Details.

This phase was considered a test phase of the pilot, and contacts were not included in the project results. The months of July and August were spent designing project promotion materials, planning the fall program and assessing the community composition in terms of representative groups/organizations which could be used to promote the project.

Twenty-seven such groups were identified and 15 meetings were held to brief these groups on the ECCO project. The strategy behind these meetings and contacts was to involve existing community organizations in an effective networking process that would publicize the ECCO name in the community.

TABLE 3

DELIVERY OF PROJECT SERVICES BY PHASES
CHRONOLOGY OF EVENTS

SPRING 1982 - PRE-TEST PHASE

March
- seminar at Danforth Technical School

May
- door-to-door flyer distribution (number of drops-offs)
- four seminars throughout community (spring tune-up series)

SUMMER 1982 - BACKGROUND WORK

June
- community networking

July
- community networking
- profesional seminar (basement insulation) —

August
- community networking
- professional seminar (air quality)
- weatherization seminar (Chinese)

FALL 1982 - DELIVERY PHASE

September
- renovation seminar (professional)

October
- renovation seminar (professional)
- weatherization seminars
- building supply demonstrations
- insulation seminar
- housewarming parties

November
- Gerrard Square Energy Show
- heating systems seminar
- weatherization seminars
- housewarming parties

December
- weatherization seminar
- housewarming parties

WINTER/SPRING 1983 - DELIVERY PHASE

January
- public forum New Neighbourhood Conference
- energy renovation advice
- housewarming parties
- tours of Howland House
- community meeting

February
- energy renovation advice
- housewarming parties
- church TEA parties

March
- energy renovation advice
- housewarming parties
- community meeting
- church TEA parties

April
- energy renovation advice
- housewarming parties
- church TEA parties

May
- energy renovation advice

June/July
- energy renovation advice

The networking approach was continued throughout the remainder of the project (Item G - Project Details). It was agreed that, where appropriate, project literature, the brochure, poster and individual flyers on seminars would be displayed and distributed through this established network.

Samples of the promotional materials developed by the ECCO project team, in conjunction with the City Clerk's Communications Division, are included in Item H - Project Details.

Additional promotion of the Riverdale project included: community and ethnic newspaper coverage, radio and cable TV features, and articles in the publications of local Members of Parliament. During this preparatory phase of the project, it was decided to address the ethnic diversity of the community by translating (with the assistance of City Hall interpretors) all project material into Chinese, Greek, Italian and French. As well, arrangements were made to hire technically qualified persons to deliver seminars in Chinese and Greek. For example, the first Chinese seminar on weatherstripping and caulking techniques, was held on August 21, and organized and promoted by the Woodgreen Community Centre -- an encouraging result of involving community groups. More than 25 Chinese speaking residents attended this session.

Two seminars directed at professionals were organized and run by the ECCO project team during this project phase. The purpose of the seminars, which concerned the controversial topics of "basement insulation" and "air quality in a tightly sealed house", was to ensure that the public received the best possible advice from the ECCO project. Both these seminars involved leading experts in the field and were considered highly successful from the view of the professional participants (Item I - Project Details). The summer phase also saw the ECCO project team move from its temporary location in a neighbourhood site planning

office into Howland House. The third ECCO Project Advisory Committee also was held in this phase (Item J - Project Details).

It was decided during this phase that, based on the insufficient response, a localized map area project approach was no longer appropriate or suitable to efficient delivery of project services. Although seminars were rotated among different community centres covering the entire Riverdale community, this was the only localized approach still being tested. Distribution of promotional materials on the project, for example, was now community-wide. The smaller area approach proved inappropriate to most forms of project promotion. It was difficult, in fact, to restrict promotion to the total project area of Riverdale. The division of the project area into North and South Riverdale, and smaller sub-areas proved unrelated to received responses to the project. Residents and community organizations, for the most part, did not think of, or conform to, these designated boundaries. This shift in the project's approach to promotion did not alter record-keeping operations. Information on each individual participant was separately recorded on a data file sheet, the importance of which project area the participant lived in was now simply minimized.

Fall 1982

With the base of community contacts in Riverdale established, and with all promotional materials ready for distribution, the ECCO team was ready to enter a full production mode of service delivery. A fall schedule was prepared (Item K - Project Details), setting out planned meetings/seminars to be held throughout the community. Again, local newspapers were contacted to assist in the promotion of these events. Area libraries/community centres undertook the responsibility of posting and distributing project information, and organized seminars to be given by ECCO project staff to their members. ECCO staff explained the ECCO project to the staff of the 12 participating schools in the Toronto Board of Education's ACE program.

A professional seminar directed at local renovators and contractors was also designed and delivered during this fall phase. "Hands on" demonstrations in energy conserving techniques were given by ECCO staff in local hardware stores on Saturdays during this period. A product seminar for all local hardware/building supply store retailers was organized following a store by store survey of products available on the shelves. Twenty building inspector trainees received a background workshop on energy renovation techniques as part of their regular training course.

A major promotional thrust of the project team was the "Gerrard Square Energy Show", held in a shopping mall that services the

Riverdale area. Held from November 2 through November 6, 1982, the week-long event was an intensive series of "how to" demonstrations in all languages; it also involved major exhibits of public and private sector energy agencies, and an energy play put on by a local high school class with the assistance of ECCO staff (Item L - Project Details).

Howland House was opened to the public on November 17 and contributed significantly to increased awareness of the ECCO project (Item M - Project Details).

The fourth and last ECCO Advisory Committee meeting was held during this phase. Based on the results of the fall phase, the Committee recommended the drafting of a proposal for a follow-up to the ECCO pilot which would expand service delivery City-wide. The idea of creating a weatherization project to target the homes of low income groups also grew out of discussions held at this meeting.

Winter/Spring Phase 1983

In January 1983, the second major thrust of the project was initiated.. The project temporarily moved outside its Riverdale boundaries by organizing a public energy renovation clinic and demonstrations as part of the Ministry of Municipal Affairs and Housing's "New Neighbourhoods Conference". These were well attended by over 1,000 persons on the two consecutive evenings, January 31 and February 1.

Take-up of project services, particularly the housewarming party and energy renovation advice, improved markedly during the winter/spring, a trend attributable to increasing familiarity with the ECCO name and Howland House in the Riverdale community. Word of mouth recommendations by ECCO participants were also helping to increase the response to project services. ECCO project posters were being displayed in local banks, supermarkets and hardware stores. The housewarming party was booked on average two to three times a week. Each housewarming party accounted for about four hours of evening staff time. Similarly, Energy Renovation Advice appointments, although usually conducted during the day, on average accounted for two to three hours of staff time per appointment. Along with the co-ordination and promotion of the other services, these two services accounted for the major part of the project team's time.

Responding to technical telephone enquiries also contributed significantly to use of staff time during this phase. This was due to the length of time involved in adequately answering callers' technical questions. The popularity of Howland House contributed to many of the increased technical calls received in this phase. While Howland House proved an effective promotional tool for the ECCO team, conversely many Riverdale residents became

somewhat more aware of Howland House because of ECCO services. The measurement of response to the ECCO project by various forms of promotion indicates that the distribution of ECCO flyers/posters yielded the largest response to the project, not Howland House, although it proved a significant contributor (Figure 20, p. 40).

The ECCO slide/tape show was finalized during this phase of the project and used at various community meetings for promotional purposes. Once transferred to video, a local Cable TV agreed to air it on a regular basis.

The proposal for a City-wide ECCO Demonstration project (to be funded under the Bilateral Agreement) and the proposal for a NEED-COED job creation "Draftstop project" were also prepared and submitted for approval during this phase (Item N - Project Details).

In the spring of 1983, a final community-based promotion was launched. It involved the preparation of a low-cost flyer, which was again distributed on a door-to-door basis. Perhaps due to increased familiarity with the ECCO name in the Riverdale community, response to this effort was far more encouraging than the response to the first flyer drop-off in the initial spring phase of the project. Owing to the demand, ECCO project staff extended service delivery of the housewarming parties and energy renovation advice into May and June. Energy Renovation Advice is at present being delivered on request (on average two to four appointments per week are still being requested), although no further promotion of this service has been undertaken in the community. The highest utilization of ECCO project services occurred in this last phase of the project. This can be attributed to the build-up of participants, based in part on word of mouth referral.

The Draftstop proposal received approval mid way through this phase, and the ECCO team was involved in the establishment of the administration procedures and training program for the workers. The Draftstop project is now underway, weatherstripping and caulking the homes of some of the City's needy low income target groups: seniors, disabled persons and single parents. The project is providing training and jobs for unemployed persons for one year.

When it became clear that bilateral approval for the ECCO Demonstration proposal would not be forthcoming in the near future, the Ministry of Energy proposed that the City prepare transfer materials on the successfully tested techniques developed by the ECCO Pilot, for possible use by other municipalities. The City and the Province have now signed a cost-sharing agreement to prepare these materials. This new agreement is referred to by the City as the ECCO Transition Project, which will run from September

1983 to April 1984. In conjunction with this work, the Buildings and Inspections Department will be expanding the service of energy renovation advice City-wide and assigning additional inspectors to help out. A training course in energy renovation advice for building inspectors is being prepared pursuant to the ECCO Transition Project contract. The development of this service and strong support for it from the Buildings and Inspections Department directly meets one of the pilot's key objectives - "the improvement of quality of retrofit measures being undertaken, by homeowners or contractors".

4. PROJECT RESULTS AND CONCLUSIONS

This section of the report will be discussed under a series of major headings. These are:

- Penetration of the Target Population
- Energy Savings - Present and Potential
- Evaluation of Promotional/Outreach Techniques
- Evaluation of ECCO Project Services, Associated Services, Special Events/Programs, and Associated Programs
- Evaluation of Advisory Committee
- Implications for other Municipalities

- Penetration of the Target Population

The take-up of project services by Riverdale households is presented in Table 4. This table summarizes take-up for the complete run of the pilot. A breakdown of take-up in the fall and winter/spring phases is provided in Table 5. The only figures that include households from outside of the Riverdale area concern the Gerrard Square Mall Show and the Hardware Store Demonstrations. Telephone enquiries have been considered on a percentage basis and have been separated from inquiries requesting other project services.

TABLE 4

ECCO PILOT PROJECT - ACTUAL CONTACTS BY PROJECT SERVICES, SEPTEMBER 1982 TO MAY 1983

ECCO Project Services	Actual Contacts by Riverdale Households*
1. Housewarming Parties (24 x 4)	96**
2. Renovation Advice (individual appointments)	105
3. Hydro Home Check-ups (individual appointments)	129
4. Oil Efficiency Tests (individual appointments)	50
5. Technical Telephone Enquiries	260
6. Courses	
Professional courses:	
(a) Three part energy renovation course for local contractors	12
(b) Course on energy renovation for 20 City building inspectors	***
(c) A professional seminar on product materials for the local hardware store owners; 50% of Riverdale hardware store owners attended this session	12
Public Courses:	
(a) Three seminars concerning weatherization, insulation and heating system efficiencies	45
(b) Six weatherization courses at Community Centres throughout Riverdale (three in Chinese)	100
7. Gerrard Square Energy Show	
(November 2-6, 1982)	
On-going Demonstration/Exhibits available to 80,000 mall visitors. Estimate of households observing demonstrations only	500

ECCO Project Services		Actual Contacts by Riverdale Households*
8. Hardware Store Demonstrations		
Demonstration were held in six Riverdale hardware stores. Contacts, i.e. people who observed one or more demonstrations and asked questions ranged from a handful of residents to upwards of 50-60 persons depending on the hardware store		200
ECCO Related Services****	Sub-total	1,509
9. Howland House		
Visits by Riverdale Households		400
10. Ecumenical Energy Work Group (EEWG)		
ECCO services were promoted to over 100 Riverdale households by this project		100
11. Public Forum - New Neighbourhoods Conference		
(January 31 - February 1, 1983)		
An energy renovation clinic and ongoing demonstrations attracted over 1,000 observers on the consecutive evenings. This figure is not included in the household contacts as it represents those from outside of the project area.		
	Sub-total	1,509
TOTAL CONTACTS, SEPTEMBER - MAY		2,009

Summary

As there are a total of 18,000 households in Riverdale, the ECCO pilot project had serviced 11% of all Riverdale households by the pilot's completion in May. Although the Gerrard Square Energy Show and the Hardware Store Demonstrations attrached larger number of residents, they were the most difficult to access in terms of households contacted. A percentage rating was applied to the total numbers to determine participation by Riverdale households. As much as possible, double counting was minimized, as each participant was recorded based on the service they requested. Again, the Gerrard Square Energy Show and the Hardware Store Demonstrations are the more difficult to estimate.

* Actual contacts by Riverdale households are defined as households that have been directly assisted by any of the above ECCO Project-related services.

** The figure for attendance of the housewarming parties is conservative, since, in many instances, more than four households participated. (Four was the minimum figure for hosting a housewarming party.)

*** This figure was not included in the household contacts, as it does not represent Riverdale households, although trained building inspectors working in the east end may promote actions taken by Riverdale residents.

**** Howland House and EEWG are included in ECCO contacts and defined as related services. The numbers cited here represent ECCO staff contacts with Riverdale residents visiting Howland House, and not total visits through the demonstration house. The number of EEWG contacts represents only those households referred by this project for an ECCO service.

TABLE 5

BREAKDOWN OF PROJECT SERVICE TAKE-UP BY FALL AND WINTER/SPRING PHASES

ECCO Project Services	Actual Contacts by Riverdale Households*
FALL PHASE 1982 - CONTACT BY PROJECT SERVICE	
1. Housewarming Parties	28
2. Renovation Advice	34
3. Hydro Home Check-ups	80
4. Oil Efficiency Tests	22
5. Technical Telephone Enquiries	60
6. Courses	
• Professional	24
• Public	145
7. Gerrard Square Energy Show	500
8. Hardware Store Demonstrations	200
Sub-total	1,093
9. ECCO Related Services - Howland House	300
10. Ecumenical Energy Work Group (EEWG)	35
Total	1,428
WINTER/SPRING PHASE 1983 - CONTACT BY PROJECT SERVICE	
1. Housewarming Parties	68
2. Renovation Advice	71
3. Hydro Home Check-ups	49
4. Oil Efficiency Tests	28
5. Technical Telephone Enquiries	200
Sub-total	416

ECCO Related Services	Actual Contacts by Riverdale Households*
6. Howland House	100
7. Ecumenical Energy Work Group (EEWG)	65
Total	581
TOTAL - Households Serviced	2,009

It is evident from these tables that the take-up of project services differed in the two phases. In the fall phase, staff time and promotional efforts were directed at attracting larger numbers of Riverdale residents for each session or event. This is illustrated by the hosting of the Gerrard Square Energy Show, the Hardware Store demonstrations, and the larger seminars.

In contrast, the spring/winter phase concentrated on the refinement and delivery of the two key ECCO project services - the Housewarming Party and Energy Renovation Advice. This effort is evidenced by the greater take-up of these services in this phase. Both these services emphasized in-depth advice rather than large numbers - quality, not quantity.

4.1.2 Survey of Target Population

The quantitative procedure used in the evaluation was Option 1 as set out by Chris Conway in "Energy Conservation Community Outreach Program: A Discussion of Alternative Evaluation Methodologies" (Item O(a) - Project Details). It should be noted that this procedure allows for descriptive statistics only. The biased selection of the survey sample is also a detriment to the validity of the statistics generated by the evaluation procedure. The reasons for selecting this procedure are explained in Item O(b) - Project Details. One of the main reasons was financial, insofar as the cost of a more exhaustive evaluation would have equalled the project budget.

4.1.3 Data Collection

The data required to complete this section of the evaluation were obtained in three stages. All the data were stored on a SAS data file using the City's mainframe system. A copy of the data file sheet is found in Item P - Project Details. The first stage was when a resident of the Riverdale community requested assistance from ECCO project staff. At this point their name, address and the service requested was entered onto the data file.

The second stage consisted of collecting all the relevant data on the building itself from the City of Toronto's Land Use File. This included information such as the type of dwelling, above grade floor area and the year it was constructed.

The third stage, which provided most of the data, was the questionnaire (Item Q - Project Details). The questionnaire was mailed out to 567 project participants. Subtracting the Gerrard Square Show and the Hardware Store Demonstrations from the 2,009 contacts resulted in a figure of 1,209 recorded contacts by other project services. Again, the 400 Howland House contacts were further subtracted, leaving a total of 909 who participated in a direct ECCO service. Therefore, the 567 surveys represent 62% of direct ECCO service participants. The sample selected was therefore biased and not selected at random, thereby hindering the statistical significance of this analysis. After a week and a half, those who had not returned the questionnaire were contacted by telephone. The final response rate was 15%. Although this represents a fairly good response rate for a mailout questionnaire (the norm is approximately 11%), many questionnaires were returned with missing data. It was proved that the allocated evaluation time was not sufficient to allow for responses and call-backs to obtain missing data. The survey results, although beneficial in assessing the project, are not truly representative of the ECCO participants for the reasons cited above. Further, as many were later participants, that is spring of 1983, reduced heating results will not be available until the end of the next heating season. The survey results should therefore be reviewed with this cautionary note in mind.

4.1.4 Survey Results

Housing Characteristics

As is the norm for the Riverdale area, the majority of participants (98%) live in buildings constructed prior to 1945 (Figure 1) with 55% being semi-detached, 35% detached and 9% row/town housing (Figure 2). Two and three-storey structures were most common.

Demographics

The sample surveyed showed that those people requesting ECCO services were a biased sub set of the Riverdale population. They were in general more likely to be:

- born in Canada (58%) (Figure 3)
- English speaking (80%) (Figure 4)
- between the ages of 30-40 (37%)
- upper income (85% had incomes of over $30,000) (Figure 5)
- live in two-person households (45%) (Figure 6)
- live in owner occupied dwelling (83%) (Figure 7)

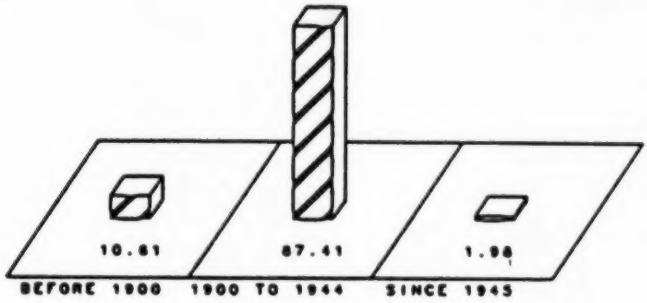
- have lived in their houses between 3-10 years (40%) (Figure 8)

The data received from the 1981 Census show that the Riverdale area as a whole, is:

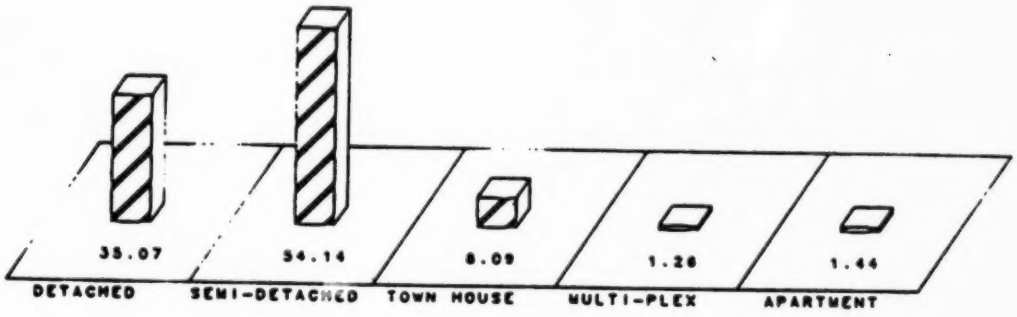
- English speaking (63%)
- in the 30-54 age group (38%)
- two-person households (26%)
- owned units (58%)

(Refer back to Table 1 for a more complete profile of the Riverdale Community.)

Period of Construction



Type of Dwelling



HOUSING AND DEMOGRAPHIC CHARACTERISTICS

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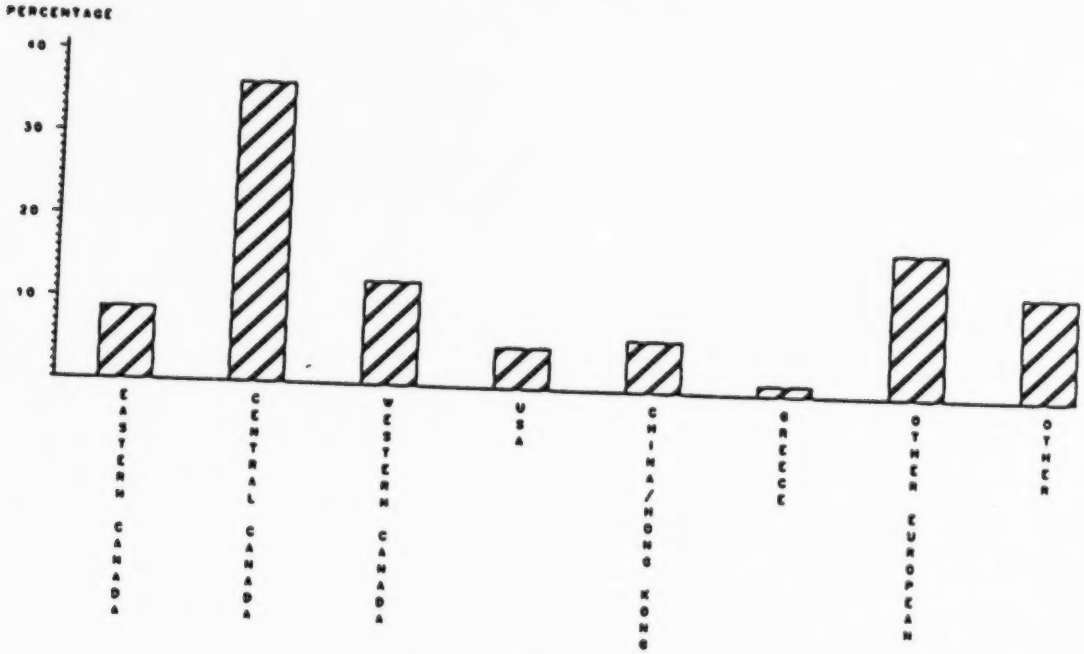
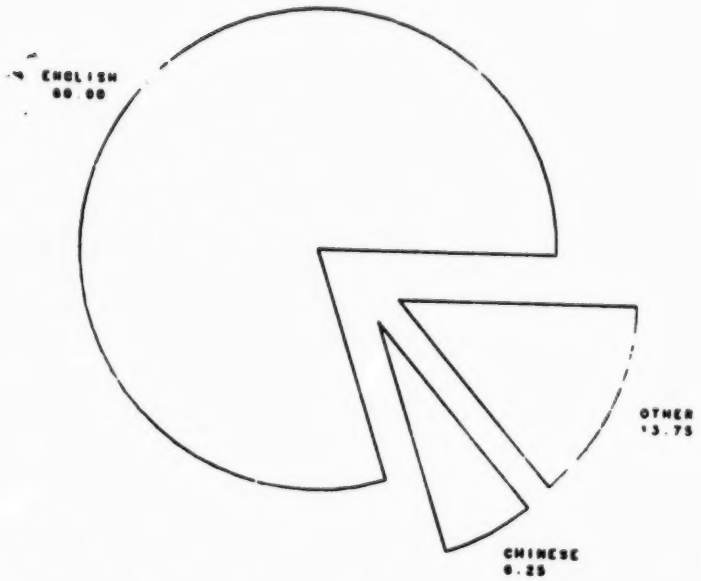
Place of Birth



Mother Tongue



HOUSING AND DEMOGRAPHIC CHARACTERISTICS

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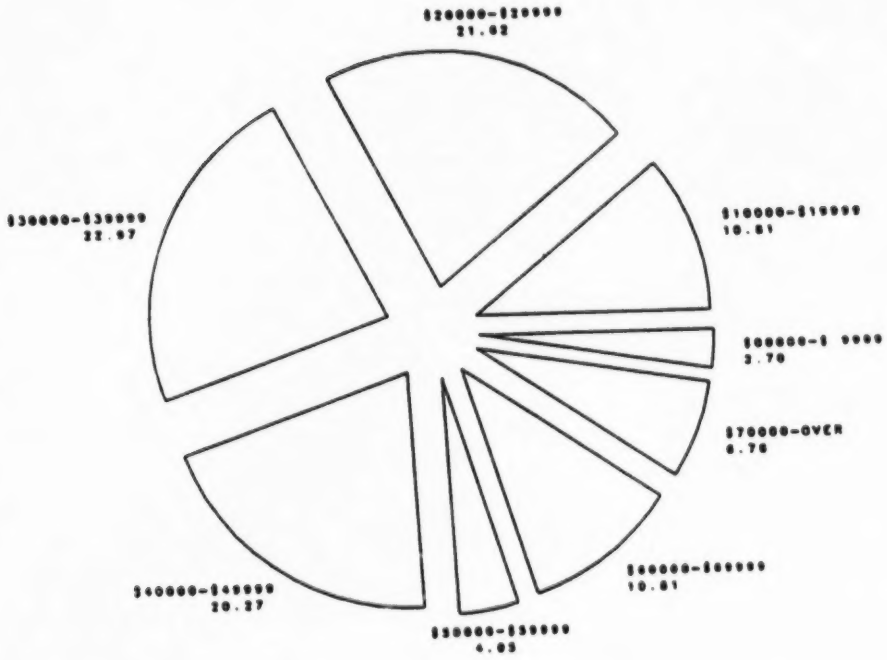
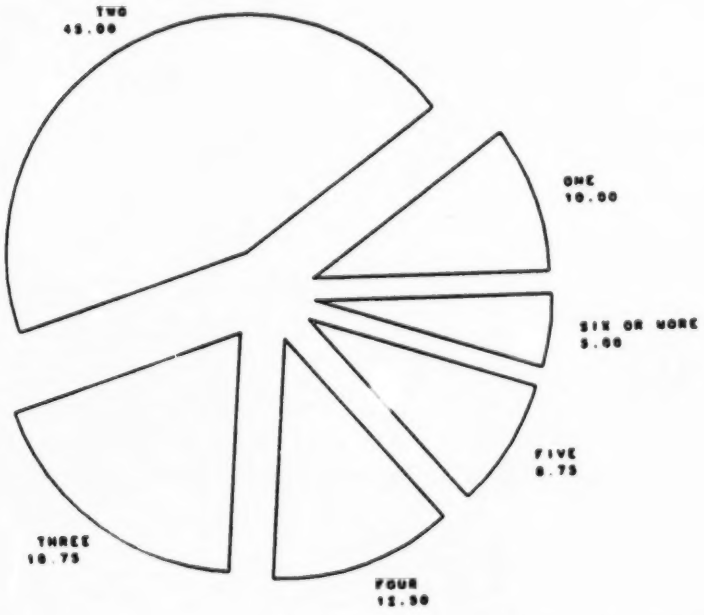
Total Family Income



Residents per Household



HOUSING AND DEMOGRAPHIC CHARACTERISTICS

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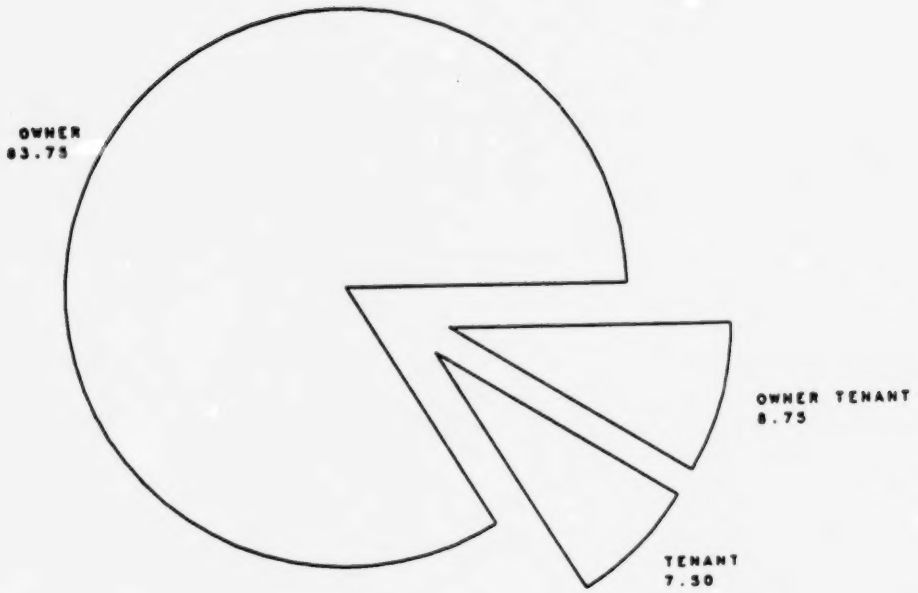
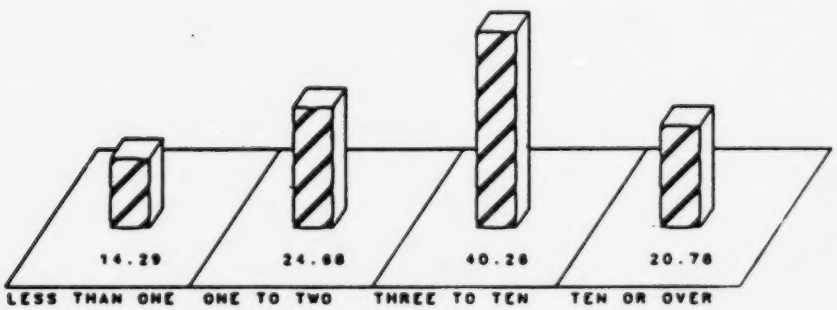
Tenure



Length of Occupancy (in years)



HOUSING AND DEMOGRAPHIC CHARACTERISTICS

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4.2 Energy Savings - Present and Potential

An important measure of the effectiveness of the ECCO project was the extent to which participants actually reduced their energy consumption. A major problem is that many ECCO participants received advice during, or at the end of, the most recent heating season. Similarly, there is no way of estimating what measures had been taken by homeowners after they had received advice or if the homeowners in question will carry this work out at present or in the near or longer term. Regardless of the above, data were collected from those participants willing to release their utility consumption figures for the 1981-82 and 1982-83 heating seasons. Of those who returned the questionnaire, 47% provided these records or allowed access to them.

To determine the space heating requirements for the sample, the following procedure was used. First, the energy used for hot water heating and/or cooking, was subtracted from the space heating fuel if these were the same. The figures used to complete this were obtained from a Heatsave fact sheet entitled "Do-it-Yourself Home Energy Rating". (Figures used were as follows: if gas, 240 ccf - hot water heater, 100 ccf - stove and 72 ccf - clothes dryer; if electricity, 800 Kwh - stove, 1600 Kwh - fridge, 800 Kwh - freezer, 1300 Kwh - lighting and applicances, 4000 Kwh for a hot water heater.). The formula used to calculate the space heating requirements (in Kwh per square foot) was as follows:

$$\text{GAS} - \frac{\text{Amount in CCF} \times 17.7}{\text{square footage of house}} \quad \text{in Kwh per square foot}$$

$$\text{OIL} - \frac{\text{Amount in gallons} \times 29.5}{\text{square footage of house}}$$

Second, the amount of energy consumed in the 1981-82 season was reduced by 12.1% to allow for degree day variations. Degree days for 1981-82 were 3,814 while in 1982-83 they were only 3,353.

From this, the mean consumption for participating households for 1981-82 was calculated to be 3.9 Kwh per square foot while for 1982-83 it was 4.2 Kwh per square foot. These figures are not truly accurate in the sense that they are considerably low. The reason for this is that basement floor area was not available, therefore, reducing the amount of floor area to be heated.

As mentioned, due to the number of extraneous variables, it is not surprising that the 1982-83 fuel consumption is higher than that of 1981-82. It should be noted that, even if these figures were reversed, the incurred savings could not be directly attributed to

ECCO. Only by comparing ECCO participants to ECCO non participants could this be accurately asserted.

To assist in depicting what ECCO participants were planning on doing to reduce their consumption, the following question was asked in the questionnaire.

"4(A) Based on the information you received from ECCO, how likely are you to do any of the following improvements over the next year."

The results were as follows:

	Not Likely	Maybe	Very Likely
	%	%	%
Reduce basement air leakage	20	16	55
Reduce door/ window/baseboard air leakage	20	13	66
Reduce attic air leakage	55	8	33
Add basement insulation	67	12	21
Add wall insulation	71	8	21
Add attic insulation			
Add moveable insulation to windows (e.g. pop-in shutters, insulated blinds)	61	20	19
Add glazing to existing windows (e.g. interior storm windows)	72	10	18
Improve your present heating system (e.g. have furnace serviced, change filter, etc.)	49	6	45

As can be seen, the likelihood that the majority of participants will undertake weatherization measures is quite strong. Because weatherization work offers high paybacks for a low cost approach, it was a very strong component of the ECCO project's service delivery. (Refer to Figures 9-17 for comparison graphs of the responses to energy conserving actions.)

To assist in understanding ECCO participants' knowledge of saving procedures, they were asked the question:

"In which category below would you have placed yourself before you obtained assistance from ECCO? (Please be honest; check one).

. I had never given much thought to reducing my fuel bills. (5%)

- I wanted to reduce my fuel bills and make my home more comfortable but was not sure as how to go about it (38%)

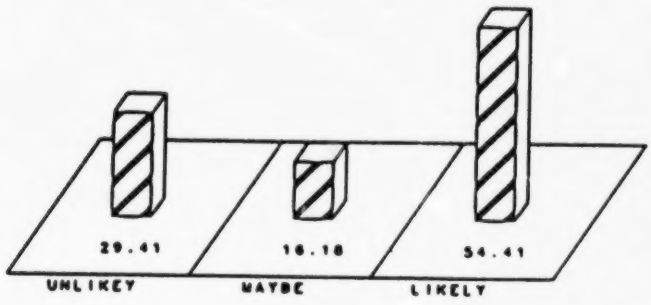
- I was competent in certain areas of energy conservation practice but needed additional information (e.g. did not know proper procedure when installing a vapour barrier). (40%)

- I knew what I was doing all along but just wanted a second opinion (10%)

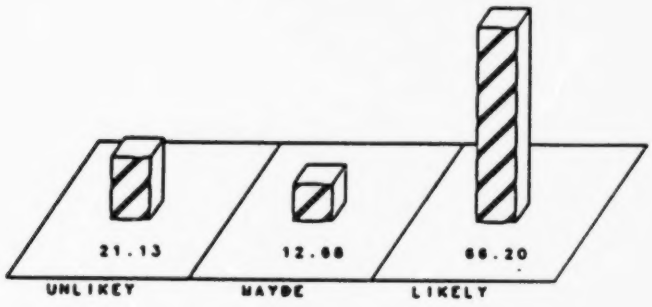
- Other, please specify. (8%)"

From this, 40% stated they were competent but needed additional information, while 38% stated they did not know what they were doing before they received assistance (Figure 18). This indicates that there are still many individuals who are relatively ill-informed when it comes to proper energy saving procedures. This conclusion is strengthened insofar as 98% of the sample stated that they had seen advertisements promoting energy conservation, but were uncertain in many instances, aside from turning down thermostats, as to how to go about it (Figure 19). This response supports the point that, although aware of the need to conserve energy in the home, the majority of the participants who responded to the questionnaire clearly stated that they were unsure of what energy saving procedures to take and how to do them.

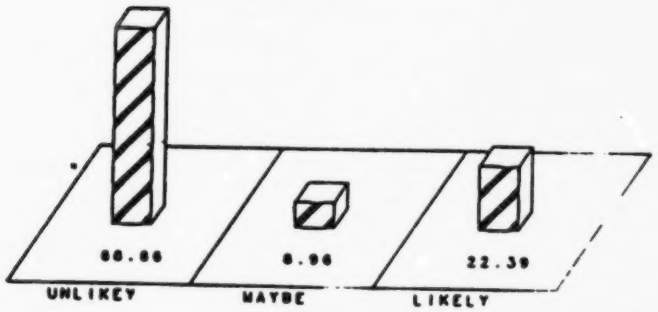
Basement Air Leakage



Shell Air Leakage



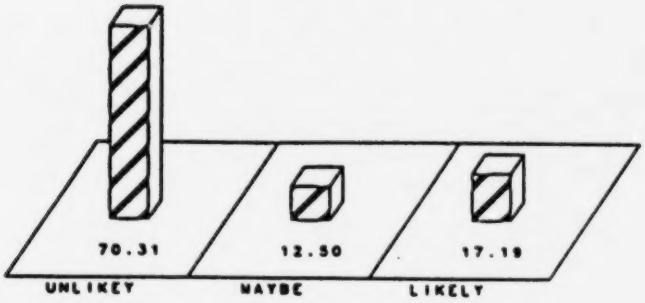
Attic Air Leakage



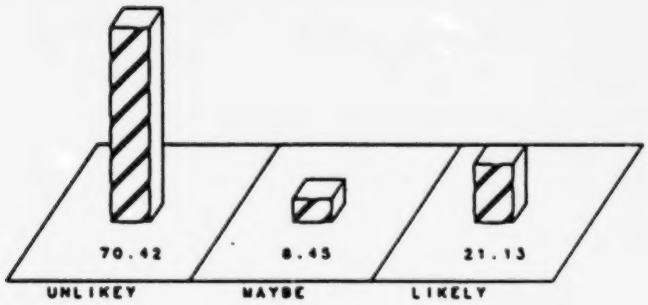
RESPONSES TO ENERGY CONSERVING ACTIONS

CITY OF TORONTO PLANNING AND DEVELOPMENT DEPARTMENT
STEPHEN G. McLAUGHLIN, COMMISSIONER
RESEARCH AND INFORMATION SECTION OCT., 1983

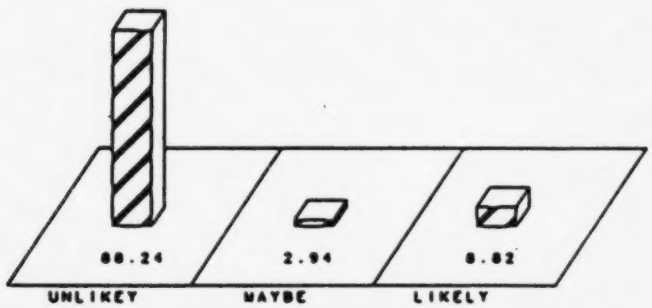
Basement Insulation



Wall Insulation



Attic Insulation



RESPONSES TO ENERGY CONSERVING ACTIONS

CITY OF TORONTO PLANNING AND DEVELOPMENT DEPARTMENT
STEPHEN G. McLAUGHLIN, COMMISSIONER
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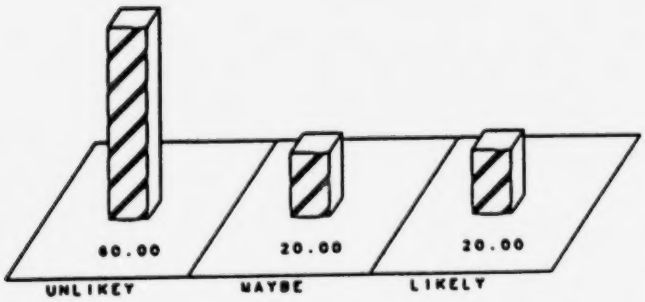
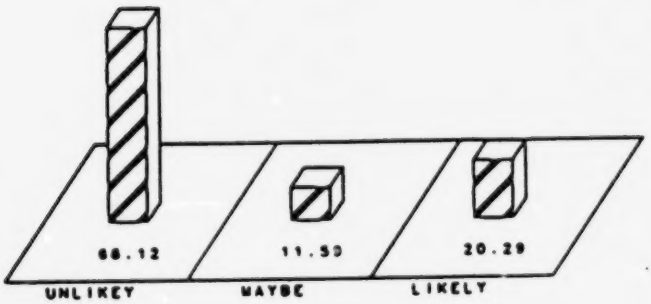
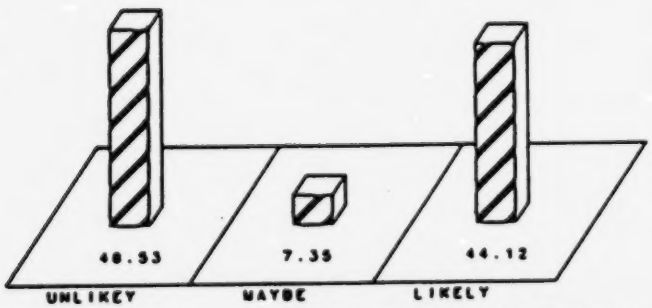
Moveable Insulation



Window Glazing



Improve Heating System



RESPONSES TO ENERGY CONSERVING ACTIONS

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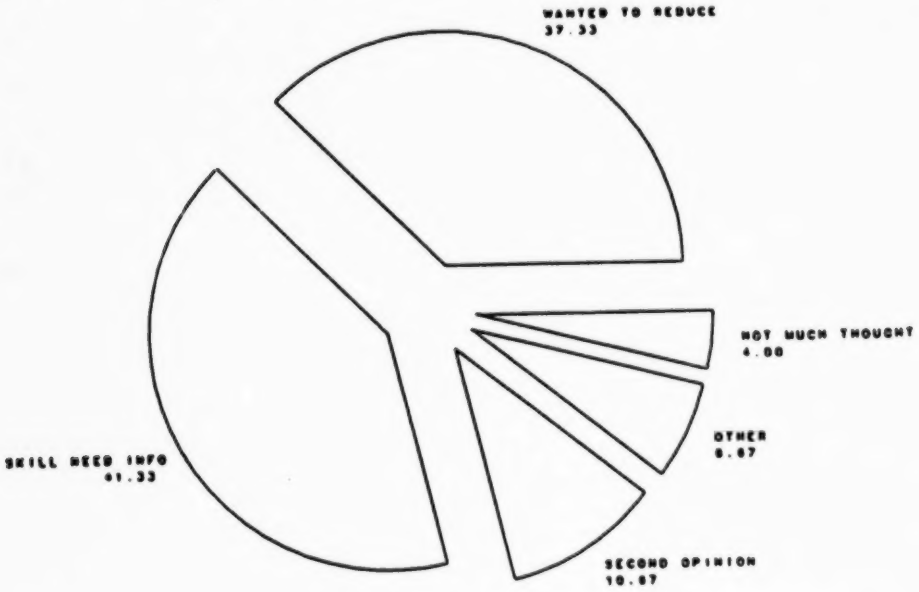
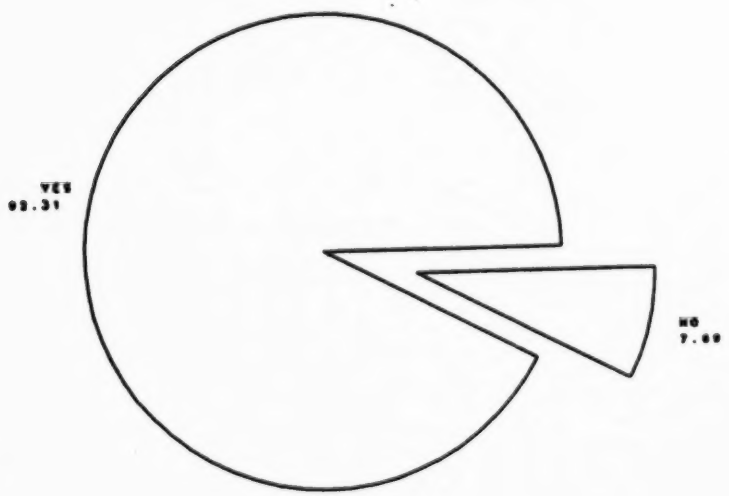
Conservation Awareness Initiative



Seen Energy Advertisements



AWARENESS

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STEPHEN G. McLAUGHLIN, COMMISSIONER
RESEARCH AND INFORMATION SECTION OCT., 1983

4.3 Evaluation of Promotional/Outreach Techniques

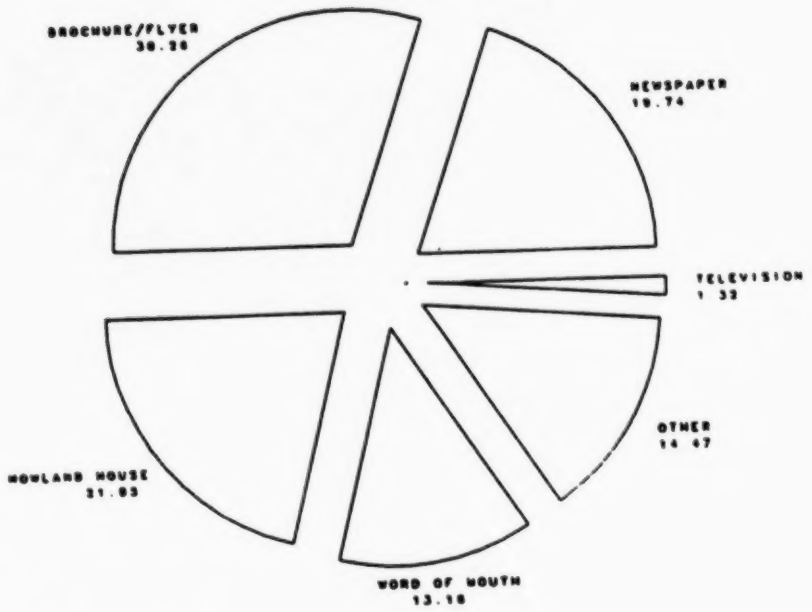
4.3.1 Overview of General Approaches

The pilot characteristic of the project allowed for testing and refining different services and different ways of promoting ECCO project services to the Riverdale community. One of the objectives of the pilot was, in fact, an evaluation of the effectiveness of various approaches to encouraging community participation in an energy outreach project. A significant amount of project staff time was expended in the promotion of the project, which could perhaps have been better allocated to service delivery. Hence, while the pilot provided a basis for evaluating approaches, this was at the expense of efficiency in project service delivery. The initial approach of a door-to-door flyer distribution proved ineffective. In view of the expense associated with the design and production of brochures and posters, a less expensively produced fact sheet on the project itemizing the services available might have proven to be a better choice for early promotion efforts. The later and more successful project brochure was designed in this form.

One encouraging finding is that the approaches that best promoted the project were those that were of little or no extra cost to the City. These included: articles written by the ECCO team for local newspapers (translated into the major languages in some cases), Cable TV's regular airing of the ECCO slide show, the support of the representative community groups and organizations, Toronto Hydro staff and Howland House staff promotion of the project, the City Clerk's Communications Division press releases on project events, and the least measurable but most effective word of mouth promotion by ECCO participants to their friends and neighbours. Participant response to the ECCO pilot by how they heard of the project is illustrated in Figure 20.

Based on the various approaches tested, it must be concluded that the use of existing networks of information distribution is far more effective than attempting to set up a separate and costly network to promote a new project. Although the slide show was expensive to produce, it proved an effective vehicle for providing information on the project and motivating the involvement of professional groups. It was less effective as a promotional tool for public involvement. Apart from its airing on Cable TV, and showings to professional audiences, this medium was not used as extensively as planned because of the equipment requirements. The ECCO slide show was produced as a two projector show, which also required a separate mixing unit which is not readily available. A simpler one projector slide show or video production would be recommended. Although this may not be as impressive as the two projector show, its use would be greater because of the minimal equipment requirements and reduced chance of equipment failure.

How was Project Heard of?



AWARENESS

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4.3.2 Evaluation of Approaches

Networking

The goal of the networking approach was to establish the project name within the community, and perhaps more importantly to gain the trust of the community. In the early stages of the project, this trust was not established, as evidenced by concern that ECCO was a new company, or an inspection agency.

The networking approach involved contact with all existing community centres, libraries, health clinics, etc., in order that they would distribute literature and advertise community events involving ECCO on a continuous basis. It also involved contacting stores offering energy products, such as hardware stores, and requesting that they also post ECCO literature.

One of the main comments to be made about this approach is that no individual promotion effort yielded a major response. It was the combined effect, over the course of time, as people were exposed to the service again and again, that yielded larger numbers.

Once the ECCO name and trust was established, word-of-mouth advertising became more important, although other promotional efforts still helped to motivate people into action, for example, the second distribution of flyers, which generated a far greater response than the first distribution.

Ethnic Community

The translation of ECCO related promotional materials into the major languages in the project area was crucial to any inroads that the project would make in these communities. A drawback was the lack of any of these language speaking abilities on the part of the project team. This problem was resolved to an extent by hiring ECCO trained translators to deliver some of the project services. It would have been beneficial had a staff person been able to respond to telephone enquiries in one of the different languages. A referral was always necessary, either to the City's interpretors or the ECCO translators. The printing of ECCO articles in the major language newspapers was not that effective in generating a response in Riverdale, as the circulation of these papers far exceeded the boundaries of the project area. However, the articles did attract outside attention.

Of the two main ethnic groups, the Chinese and the Greek residents, the project was far more successful in involving the former. Seminars and housewarming parties and tours of Howland House in Chinese, were regularly scheduled and well attended. By contrast, the Greek population, except for a few individuals, did not respond to the project. Numerous efforts to involve the Greek community through their representative leaders and organizations

proved ineffective. One theory behind the unsuccessful attempts to involve the Greek community, cited by a Greek community leader, is a general wariness of government assistance programs. The Greek community tends to provide its own services and support systems, and does not place high regard on assistance from outsiders.

CHART 1 - EVALUATION OF ECCO PROMOTION TECHNIQUES

Promotion Techniques	Disadvantages	Advantages	Appropriate Delivery
Brochure/Flyer/Poster	• cost of production and distribution	• handy summary of project services • promotion tool • brochures are often kept	• mass mailing • display racks in information centres, libraries, stores, banks, etc.
Newspaper Articles	• reach audience outside of project area	• ethnic applicability when translated • wider attention to project	• regular newspaper distribution
Television	• local Cable TV coverage, limited, but again reaching outside of project area	• short/constant promotion of project	• local TV station - language stations
Word of Mouth	• passive form of promotion, hard to influence	• weight attached to recommendation of a friend or neighbour	• project participants
Howland House	• wider attraction than project area • somewhat overwhelming to individual homeowners	• location in project area • effective demonstration showcase - complementary but not essential to an outreach project	• Howland House sponsor - Ministry of Municipal Affairs and Housing
Gerrard Square Energy Show	• staff time needed to organize and run • hard to attract shoppers, have to use gimmicks, e.g. plays	• an intensive way to promote the project name to a large number of residents	• project group in association with the management of a shopping mall; exhibits should represent public and private sector interests

4.4 Evaluation of ECCO Project Services, Associated Services, Special Events/Programs, and Associated Programs

4.4.1 ECCO Project Services

The ECCO project team was very effective in delivering those services over which it had complete control, that is, the services it was responsible for developing and carrying out. The two that are most prominent are the Housewarming Party and Energy Renovation Advice. It is clear that word-of-mouth promotion by participants contributed to the significantly increasing take-up of these services in the last phase of the pilot. Feedback to project staff on these services was extremely positive. Most residents were surprised that the City offered these services, and that few members of the public knew about it (Item R - Project Details).

Both services were directed at encouraging proper action, as they were site specific and closely supervised by project staff. Moving from providing general information and advice to responding to very detailed technical concerns about energy saving procedures proved to be very valuable to the participants. These two services successfully filled the identified gap between receiving information and taking action. More importantly, these services ensured that appropriate action was taken. This result, which is impossible to measure, is perhaps the most important outcome of this type of project. In other words, the ECCO project prevented a lot of potential mistakes, for example, insulating a wet basement on the inside. By providing instruction, the success of the energy conserving measures is more likely to be effective because of its proper application.

The housewarming party model was successfully duplicated by the private sector, in the form of a contractor who began hosting "Seal and Save Parties". Other public utilities also began offering the housewarming party under the REAP program.

Courses and seminars run by ECCO attracted a much smaller turnout of Riverdale households, despite promotion by local community groups and libraries. By the conclusion of the fall phase, it had already been determined that seminars and courses were not the best approach to community involvement. A direct service would be the more likely to be requested. Hence, more project staff time was spent on the promotion of these direct services. Letters to building permit applicants were used, for example, to promote the availability of the service of energy renovation advice (Item H - Project Details).

There were other difficult to measure spin-off effects of the project on the local economy and labour force. A survey of local retailers conducted by the project team indicated that sales of energy conservation products in the Riverdale area increased, up

over other areas of the City and over comparable figures for previous years. At least one hardware merchant reported difficulty keeping up with demand for certain types of weatherstripping and caulking products promoted through the ECCO project. The Gerrard Square Energy Show also resulted in significiantly increased sales for those participants who were demonstrating a product or products. One draft-proofing company reported that 50% of its Metro work has been in Riverdale, a fact which the company attributed in large part to the ECCO project. They have hired an additional two-person crew as a result.

CHART 2 - EVALUATION OF ECCO PROJECT SERVICES

Project Service	Disadvantages	Advantages	Appropriate Delivery - Agent
Housewarming Party	. cost of materials (if absorbed by delivery agent) . dependent on word of mouth promotion . if public agency - inability to sell materials	. on-site practical application . hands on experience for a larger group . effect - multiplier times demonstration in host house can lead to actions in participant houses	. community group/organization . public utility . private contractor . perhaps a municipality
Energy Renovation Advice	. municipal staff time . potential problems with contractors	. on-site service . promotes correct action . recommends tools and materials . shifts from inspecting to advising . objective advice	. specially trained municipal building staff
Hydro Home Check-ups	. general overview to actions not a demonstration of actions . day appointments only . lag time to getting an appointment . does not include heating systems	. attempt to be an objective survey, although delivered by Hydro . complete walk-through - orientation of what needs to be done . no cost to municipality	. public utility
Oil Efficiency Tests	. only available to oil heating customers . gives rating, not always list of recommendations . somewhat biased, as delivered by an oil company	. no cost to municipality . general indication of efficiency of furnace	. oil company . service contractor . private contractor
Courses - Professional Public	<u>Professional</u> . time consuming to organize . need lead time to obtain key speakers	. valuable in obtaining state of the art information and keeping project staff abreast of current developments	. technical representatives from designated agencies . organizing agent
	<u>Public</u> . lead time for promotion . difficult to attract large numbers to warrant cost . finding a suitable accessible location	. general information sessions to larger groups	. organizer - municipality, special interest group, or technical agency, or other levels of government
Technical Phone Information	. hard to give technical information over the phone/not site specific . sometimes interrupts other project work . varying length of responses	. sometimes less time-consuming than a site visit, depending on the request	. technical project staff . other related government agency contacts
Hardware Store Demonstrations	. perception of being a salesman . new hardware stores are not suited to demonstrations - lack of space . hard to do anything more than simple demonstration	. active promotional technique attracts passers-by	. a sales representative of a reputable company . hardware store staff

4.4.2 Evaluation of Associated Services

In conjunction with its own services, the ECCO project team successfully promoted services delivered by other agencies. These were the Toronto Hydro Audit Home Energy Check-up and the fuel oil efficiency test.

Prior to field promotion and delivery, Toronto Hydro auditors had been briefed on all aspects of the ECCO project and had been included in a City training session on termite inspection. ECCO literature was given to the auditors to be included in their conservation kits, which they left with Riverdale homeowners. ECCO generated check-ups were separately filed by Toronto Hydro for purposes of project evaluation. The only problem experienced was a delay in setting up appointments on request because of a Toronto Hydro backlog; when brought to Toronto Hydro's attention, this matter was resolved.

The housewarming party concept had been discussed with the staff of Toronto Hydro, in order to develop a service that would complement, rather than duplicate, the existing audit service. The housewarming party was recommended to recipients of a home check-up where it was evident to the auditor that hands on instruction was required. An advantage of the housewarming party and energy renovation advice services was that they were offered in the evenings. The audit, however, was available only during normal working hours, a time when many people could not be available.

The Toronto Hydro auditors were very supportive of the ECCO project and always were receptive to participating in ECCO community events or courses that were held during the evenings. More ECCO promotion of the Toronto Hydro check-up service was generated in the fall phase of the project than in the subsequent winter/spring phase. In the latter phase, it was assumed that residents could take advantage of this service on their own, in view of its increased advertising, for example, on hydro billings.

Imperial Oil agreed to provide an oil furnace efficiency testing service in Riverdale at no cost, both to support the ECCO project and to provide itself with some field research data. It considered provision of the service, as a result of an ECCO presentation to members of the the Ontario Petroleum Association. ECCO's promotion of this was more "low-key" than for some other services, because there was only one service contractor available to deliver the service and it was not in the project's advantage to create a demand than could not be met. This was a new service being offered, and at the outset, there were frequent problems with the sensitive equipment used for the testing. Later on in the project, it was found that some residents were only receiving furnace ratings and not recommendations for improvements as had been agreed upon. A few calls to the service contractor remedied

this situation. The service contractor, as it turned out, had sub-contracted some of this work, which accounted for the inconsistency of the reports. As it became apparent that other oil companies were offering and charging for this service, it became less viable for a company to do it at no charge. This service, because of its restriction to oil heating customers, was limited in any widespread application. (Most of the ECCO participant's homes were gas heated.) Also, because of the inconsistency in the recommendations being given, the service was not as beneficial as potentially it could have been.

4.4.3 Special Events/Programs

Gerrard Square

The Gerrard Square Energy show served the project well as a way to get the ECCO name better known in the community. Participating exhibitors responded favourably to an ECCO questionnaire, stating that, from their point of view, the show was a success. The only negative response was from an exhibitor accustomed to a more receptive audience, for example, at the home show. One important result of the show was that a relatively unmotivated and uninformed public was directly exposed to energy conserving information and ideas. In this case, the public were there to buy shoes/groceries and not to learn about energy products/ideas. This is dissimilar to the home show, which attracts an interested audience. Although it is impossible to measure the impact of the demonstrations on the observers, ECCO staff were told that sales of energy related products increased in the relevant mall stores. Although the mall show consumed project time in its organization and running, it was determined to be a worthwhile expeniture of project time. The most successful element was determined to be the continuous hands-on demonstrations which attracted hundreds of shoppers.

New Neighbourhoods Conference

The second event that occurred in the beginning of the winter/spring phase downplayed the ECCO name, as it was outside of the project area. Drawing from all of Metropolitan Toronto, this event was advertised in the TTC subway stations and the larger newspapers by the sponsor, the Ministry of Municipal Affairs and Housing. As part of the New Neighbourhood Conference, ECCO had been approached by this Ministry to organize a public forum on two consecutive evenings, which the Ministry would be responsible for promoting. It was decided by the ECCO team that an energy renovation clinic in one room and staged "how to" demonstrations in the exhibits room would most appropriately suit the Ministry's conference theme. Both these events recorded an attendance of well over a thousand people. While this event attracted an interested audience, in contrast to Gerrard Square, there were

benefits associated with ECCO's participation, which included exposure to a wider range of homeowners' concerns.

4.4.4 Evaluation of Associated Programs

ACE - ECCO's association with the ACE program in Riverdale in the fall phase contributed insignificantly to any project results. Most of the teaching staff briefed on the ECCO project were not themselves Riverdale residents. Although some (24) ECCO forms distributed through the schools were filled out for home check-up appointments, the return was very small, considering that 5,000 were distributed. Part of the limited response from the schools was attributed to the fact that these schools were requested, and did not volunteer, to participate in the ACE program. A separate evaluation report of the effectiveness of this program in Riverdale was prepared by the ACE program co-ordinator (Item S - Project Details). Schools outside of Riverdale volunteered for this program in the winter phase, and achieved better results. Further, this program will be incorporated in the Board's volunteer curriculum for all schools until 1985, at which point it is intended to be made into a compulsory program.

EEWG - ECCO's association with the EEWG Riverdale project proved to be a supportive arm of the outreach program. In this instance, ECCO, through the EEWG project, was able to expand services beyond the residential house form to institutional type buildings. This was identified as a group that needed such services - but lacking readily available programs. The EEWG project facilitator organized a very effective program, similar to the work plan for ECCO, for religious buildings in Riverdale. The success of this program is documented in the EEWG final report (Item T - Project Details).

ECCO and the City were able to assist this project by providing office space, typing and technical support. Of greater relevance to both projects was the ECCO team's assistance in the delivery of services, for example, the TEA party (Training in Energy Action), a housewarming party modified for church buildings. Through the TEA Parties and other EEWG organized programs, 100 Riverdale congregation members were made aware of, and participated in ECCO project services for their own homes. Toronto Hydro was also directly involved in the services of the EEWG project through its provision of church audits. The EEWG project field tested, and proved for the ECCO project, that certain of its services could be adapted to larger buildings. It further substantiated the need and demand for delivery of an on-site building specific-service. The EEWG model, like the ECCO project, is being reviewed by other communities for transfer application. Brandon, Manitoba for example, is initiating an EEWG-type project with their church community.

4.5 Evaluation of ECCO Advisory Committee

The use of a committee comprised of a body of representatives from the energy field, both public and private interests, served the project well. By using this knowledgeable committee as a sounding board for its proposed ideas, the ECCO project team could confidently deliver the services that it developed. As a unit the committee was interesting in itself as it included members who sometimes represent different interests, and who usually would not be seated in the same boardroom. The result was a variety of perspectives which significantly enriched the project.

Although participation was not consistent throughout the four meetings held, in that representatives changed or could not attend all meetings, the background support which this professional body offered the project was consistent throughout the pilot run. The Advisory Committee is credited for the suggestion of the technical seminars which the ECCO team subsequently organized.

4.6 Implications for Other Municipalities

It can be concluded from the pilot ECCO project that a municipally based delivery of certain energy services can be of benefit both to a municipality and its residents. In the ECCO example, the municipal benefits are of a political and institutional type. Usually, it is assumed that energy outreach programs offer little benefit to the municipal corporation. Unlike internal energy programs no direct dollar savings will be accrued from this type of project. The ECCO project, although delivered in only one small area of the City, generated unsolicited letters of support for the project to local politicians (Item K - Project Details).

Of longer term significance to the City is the role of the project as catalyst in changing part of one department's image and function. The Buildings and Inspections Department at the conclusion of the pilot became firmly committed to providing energy renovation advice to City residents as part of its ongoing workload. This service completely supports the department's theme of preservation of existing housing stock. The Buildings and Inspections Department is strongly supportive of having all building inspection staff trained to provide this service over the longer time frame. Giving energy renovation advice allows building inspectors to combine the role of an inspector with that of an advisor. For City homeowners, this service provides a valuable source of objective building improvement information which is now available to them. Because of this input subsequent improvements to the house structure will more likely be correctly done either by the homeowner or the contractor, thereby preventing future problems.

The benefits therefore, run full circle. The City maintains a greater degree of quality control over work being done in the

housing stock, public perception of Buildings and Inspections staff is enhanced, the homeowner and contractor benefit from receiving this service in terms of cost avoidance and minimization of future problems, and finally the housing stock, the City's tax base, is more likely to be maintained at higher standards.

The municipal base of this type of service allows for close co-operation with other services more appropriately delivered by other institutions, such as, for example, the local utility. Awareness and joint promotion of complementary services (such as a municipal renovation advice service and a hydro home audit service) is mutually beneficial and enhances public perceptions of how their tax and utility bill dollars are used.

Although the pilot was run in one small area of the City, the results indicate that this type of approach would work in a larger or smaller area, thereby supporting the applicability of this type of project to municipalities of various size. Even with limited building staff resources, an ECCO type project would more likely (based on responses to programs like the Heatsave Clinic in smaller cities) achieve a greater degree of penetration in a smaller centre. This would be likely due to a stronger word of mouth network and less competition for public time/interest, in a smaller and less diverse centre than Toronto.

Transfer materials are now being prepared as part of the ECCO Transition project. These will include a course package for training building inspectors to offer an Energy Renovation Advice service, and detailed manuals on providing this service and the technique of the housewarming party. Slide shows concerning these techniques for both professional audiences and the public will form part of these materials. It is the intention of the Ministry of Energy to provide copies of these materials to other interested municipalities in Ontario, within the context of its Community Energy Action Programs.

APPENDIX A

PROJECT DETAILS - LIST OF ITEMS

SECTION 1 - PROJECT BACKGROUND

A. A Pilot Project Proposal for an Energy Conservation Community Outreach Program - September 1981 - City of Toronto
B. Agreement between the Corporation of the City of Toronto and the Ontario Ministry of Energy, July 6, 1982

SECTION 2 - PROJECT SET-UP

C. ECCO Pilot Project Work Plan
D. Summary Map of Project Areas
E. ECCO Advisory Committee Members

SECTION 3 - PROJECT DELIVERY

F. Background Materials - Spring Phase 1982 - Events
G. ECCO Project Community Group Contacts
H. ECCO Promotional Background Material Samples; Housewarming Party/Energy Renovation Advice
I. ECCO Technical Seminars - Basement Insulation, Air Quality
J. ECCO Project Advisory Committee Agendas
K. ECCO Fall Schedule
L. ECCO Gerrard Square Energy Show Program
M. Howland House Brochure
N. Proposal for a City-wide Demonstration Project, Draftstop Proposal, Draftstop Brochure

SECTION 4 - RESULTS

Quantitative Results

O. ECCO Evaluation Options Report
P. ECCO Participant Data File Sheet
Q. ECCO Evaluation Questionnaire

Qualitative Results

R. Letters of Support
S. ACE Evaluation Report
T. EEWG Final Evaluation Report